

12EC8

Medium-Mu Triode— Semiremote-Cutoff Pentode

9-PIN MINIATURE TYPE

For Automobile Radio Receivers Operating
Directly from 6-Cell Storage Batteries

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Voltage range (DC). 10 to 15.9 volts

*For longest life, it is recommended that the heater
be operated within the voltage range of 11 to 14 volts.*

Current (Approx.) at 12.6 volts 0.225 amp

Direct Interelectrode Capacitances:^a

Triode Unit:

Grid to plate 1.7 $\mu\mu\text{f}$

Grid to cathode and heater. 2.6 $\mu\mu\text{f}$

Plate to cathode and heater 0.4 $\mu\mu\text{f}$

Pentode Unit:

Grid No.1 to plate. 0.02 max. $\mu\mu\text{f}$

Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater. 4.6 $\mu\mu\text{f}$

Plate to cathode & grid No.3 & internal shield, grid No.2, and heater 2.6 $\mu\mu\text{f}$

Heater to cathode (Each unit) 2.6 $\mu\mu\text{f}$

Characteristics, Class A₁ Amplifier:

With heater voltage of 12.6 volts

	Triode Unit	Pentode Unit	
Plate Supply Voltage.	12.6	12.6	volts
Grid-No.2 Voltage	—	12.6	volts
Grid-No.1 Supply Voltage.	0	0	volts
Grid-No.1 Resistor.	4700	33000	ohms
Amplification Factor.	25	—	
Plate Resistance (Approx.).	6000	750000	ohms
Transconductance.	4700	2000	μmhos
Plate Current	2.4	0.66	ma
Grid-No.2 Current	—	0.28	ma
Grid-No.1 Voltage (Approx.) for plate $\mu\text{a} = 10$	-2.2	-1.6	volts

Mechanical:

Operating Position. Any

Maximum Overall Length. 2-3/16"

Maximum Seated Length 1-15/16"

Length, Base Seat to Bulb Top (Excluding tip). . . 1-9/16" $\pm$ 3/32"

Diameter. 0.750" to 0.875"

Dimensional Outline See *General Section*

Bulb. T6-1/2

Base. Small-Button Noval 9-Pin (JEDEC No.E9-1)



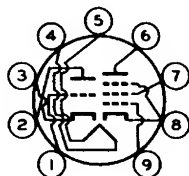
RADIO CORPORATION OF AMERICA
Electron Tube Division
Harrison, N. J.

DATA
3-61

12EC8

Basing Designation for BOTTOM VIEW. 9FA

- Pin 1—Triode Grid
- Pin 2—Triode Plate
- Pin 3—Triode Cathode
- Pin 4—Heater
- Pin 5—Heater
- Pin 6—Pentode Plate
- Pin 7—Pentode
Grid No.2



- Pin 8—Pentode
Cathode,
Grid No.3,
Internal
Shield
- Pin 9—Pentode
Grid No.1

AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

	Triode Unit	Pentode Unit	
PLATE VOLTAGE.	16 max.	16 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE. . .	—	16 max.	volts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	16 max.	16 max.	volts
Heater positive with respect to cathode	16 max.	16 max.	volts

Maximum Circuit Values:

	Triode Unit	Pentode Unit	
Grid-No.1—Circuit Resistance	1 max.	1 max.	megohm

* Without external shield.

